PCB LED

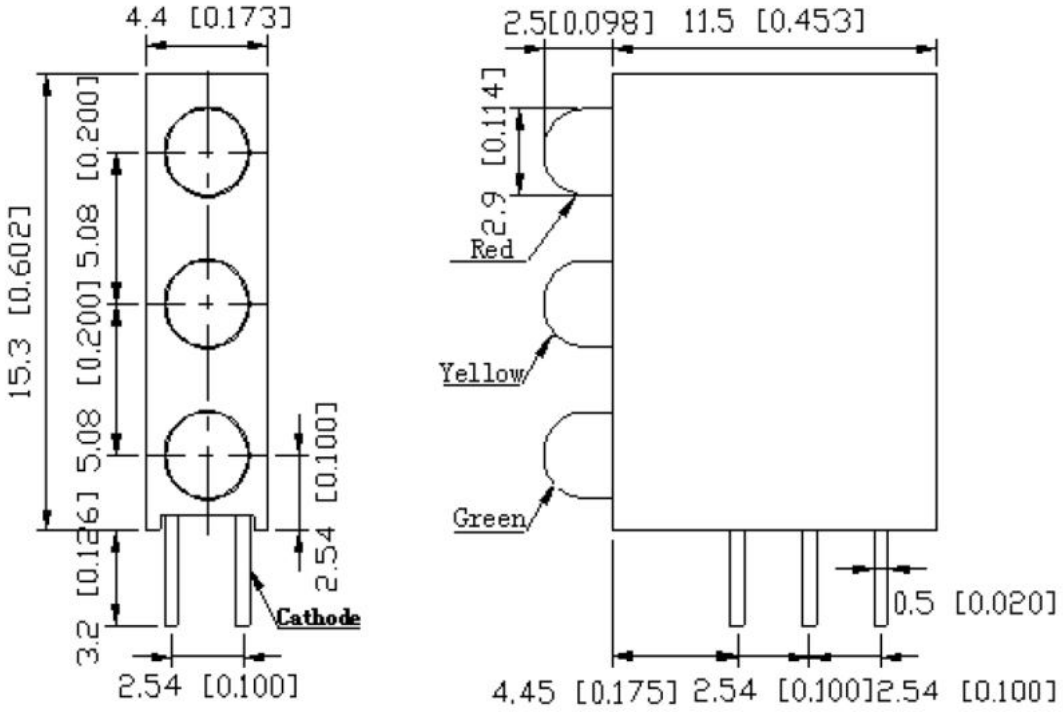
Features:

- Low power consumption.
- High efficiency.
- Good control and free combinations on the colors of LED lamps.
- Good lock and easy to assembly.
- Stackable and easy to assembly.
- Stackable vertically and easy to assembly.
- Stackable horizontally and easy to assembly.
- Versatile mounting on P.C board or panel.
- Black case enhances contrast ratio.

Applications:

- Computer.
- Communication.
- Industrial.

Part No.	Emitting Color	Lens Color(LED)
RND 135-00110	Super Red	Red Diffused
	Yellow	Yellow Diffused
	Yellow Green	Green Diffused



Absolute Maximum Ratings at Ta=25℃

Parameters		Symbol	Max.	Unit
Power Dissipation	Red	PD	60	mW
	Yellow Green		78	
	Yellow		78	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)		IFP	100	mA
Red Chip Forward Current		IF	25	mA
Yellow Green Chip Forward Current		IF	30	mA
Yellow Chip Forward Current		IF	30	mA
Reverse Voltage		VR	5	V
Electrostatic Discharge (HBM)	Red	ESD	2000	V
	Yellow Green		2000	V
	Yellow		2000	V
Operating Temperature Range		Topr	-40℃ to +80℃	
Storage Temperature Range		Tstg	-40℃ to +85℃	
Lead Soldering Temperature [4mm (.157″) From Body]		Tsld	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameters	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	Super Red	20	40	---	mcd	IF=20mA (Note 1)
		Green	20	40	---		
		Yellow	13	30	---		
Viewing Angle	$2\theta_{1/2}$	Super Red	---	80	---	Deg	IF=20mA (Note 2)
		Green	---	80	---		
		Yellow	---	80	---		
Peak Emission Wavelength	λp	Super Red	---	660	---	nm	Measurement @Peak
		Green	---	565	---		
		Yellow	---	585	---		
Dominant Wavelength	λd	Super Red	---	640	---	nm	IF=20mA (Note 3)
		Green	---	570	---		
		Yellow	---	588	---		
Spectral Line Half-Width	△λ	Super Red	---	45	---	nm	
		Green	---	30	---		
		Yellow	---	35	---		
Forward Voltage	VF	Super Red	1.50	1.80	2.40	V	IF=20mA
		Green	1.60	2.20	2.60		
		Yellow	1.60	2.00	2.60		
Reverse Current	IR	Super Red	---	---	10	μA	V_R=5V
		Green					
		Yellow					

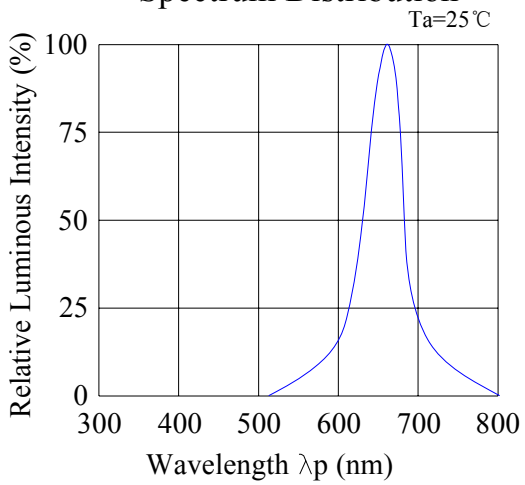
Notes:

1. Luminous Intensity Measurement allowance is ± 10%.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

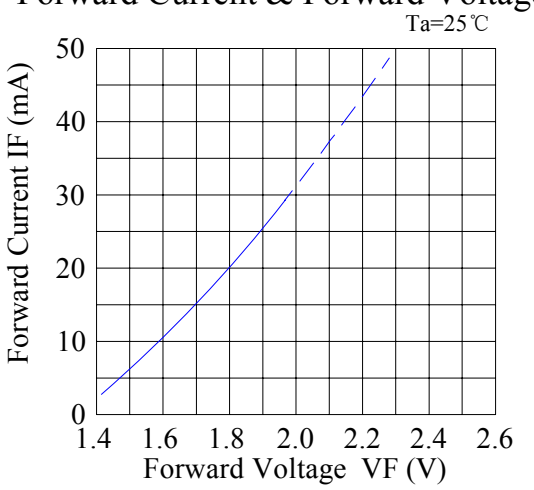
Typical Electrical / Optical Characteristics Curves (25℃ Ambient Temperature Unless Otherwise Noted)

Red:

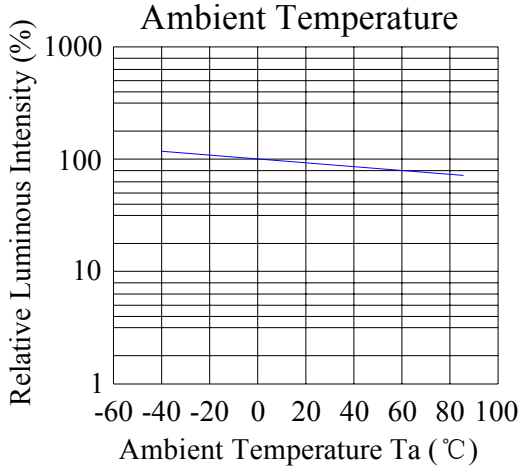
Spectrum Distribution



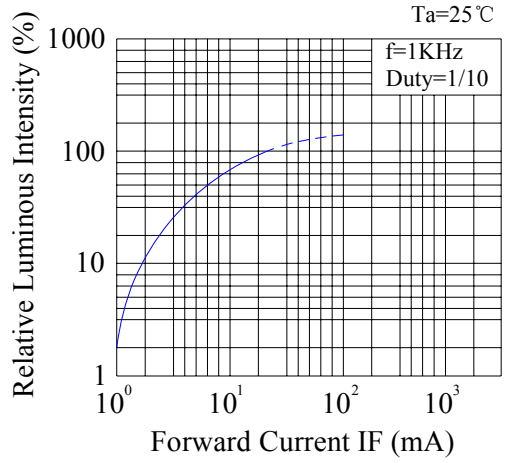
Forward Current & Forward Voltage



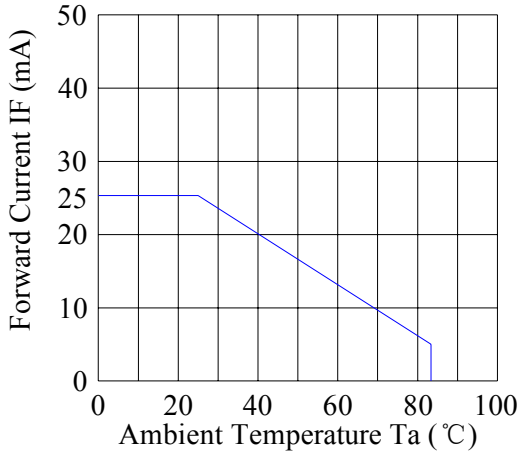
Luminous Intensity & Ambient Temperature



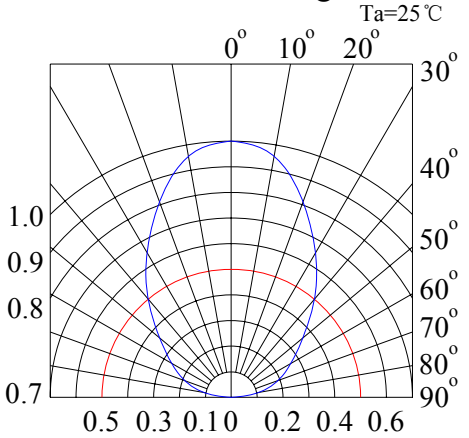
Luminous Intensity & Forward Current



Forward Current Derating Curve



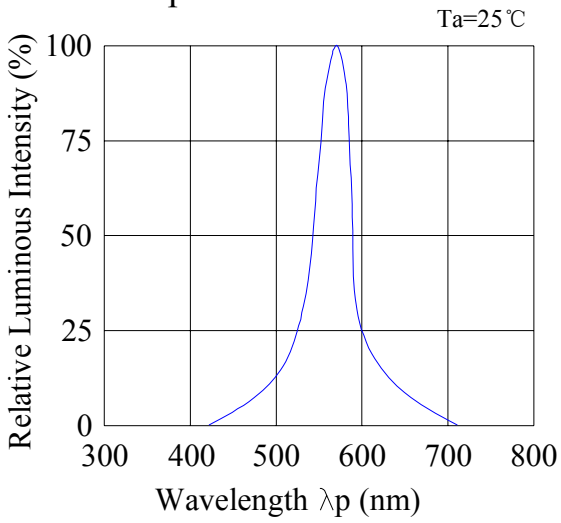
Radiation Diagram



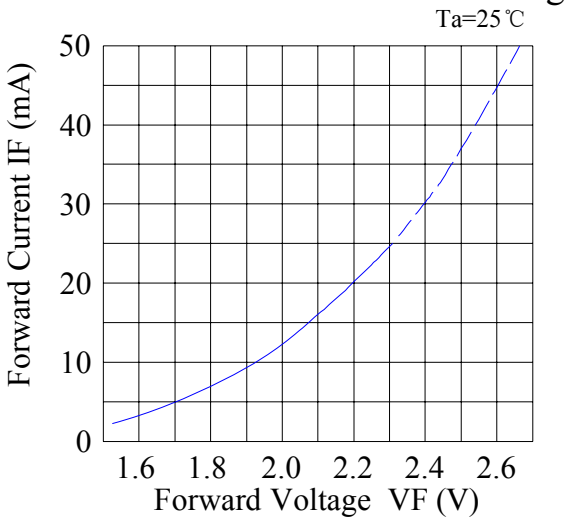
Typical Electrical / Optical Characteristics Curves (25℃ Ambient Temperature Unless Otherwise Noted)

Yellow/Green:

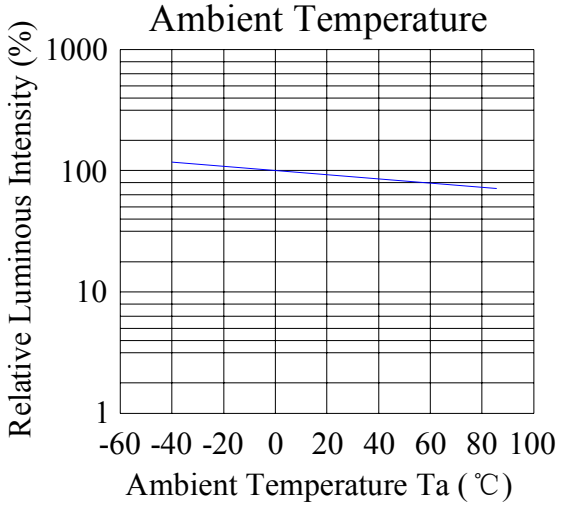
Spectrum Distribution



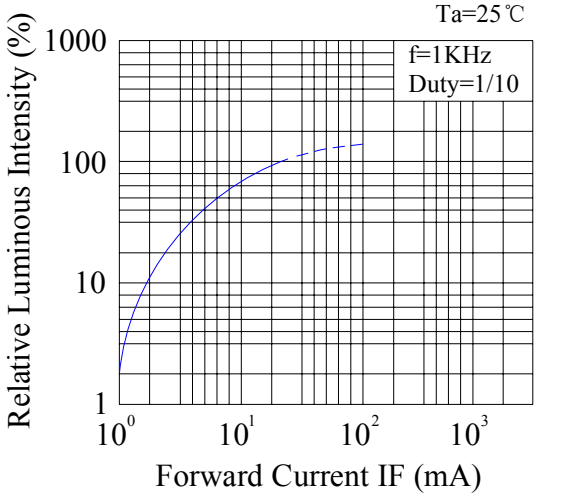
Forward Current & Forward Voltage



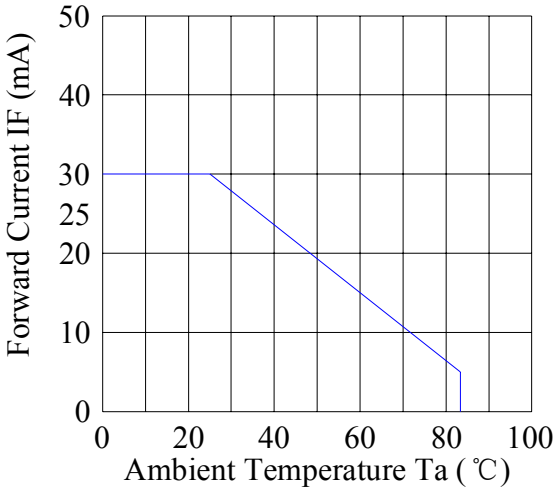
Luminous Intensity & Ambient Temperature



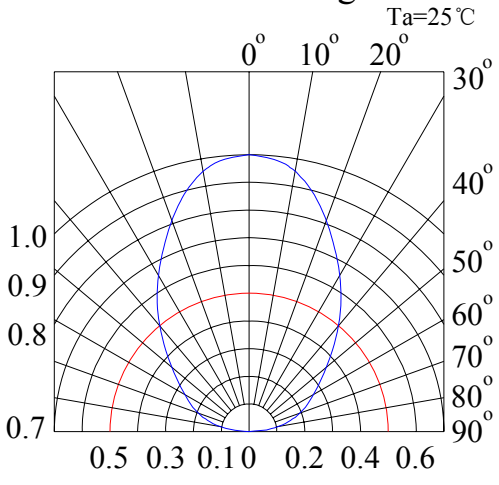
Luminous Intensity & Forward Current



Forward Current Derating Curve



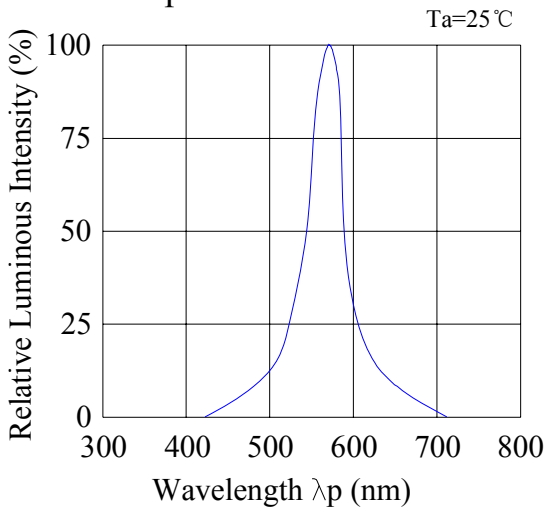
Radiation Diagram



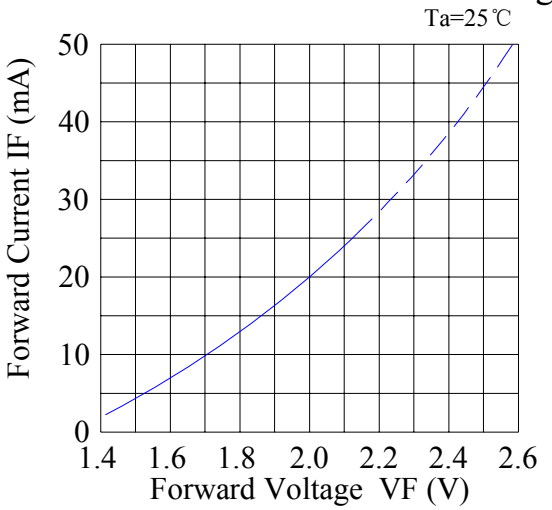
Typical Electrical / Optical Characteristics Curves (25℃ Ambient Temperature Unless Otherwise Noted)

Yellow:

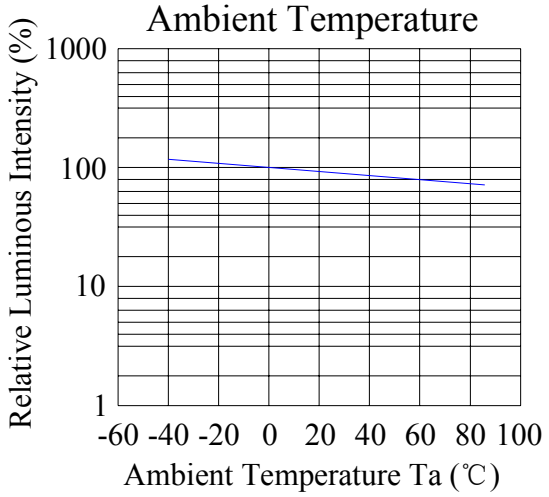
Spectrum Distribution



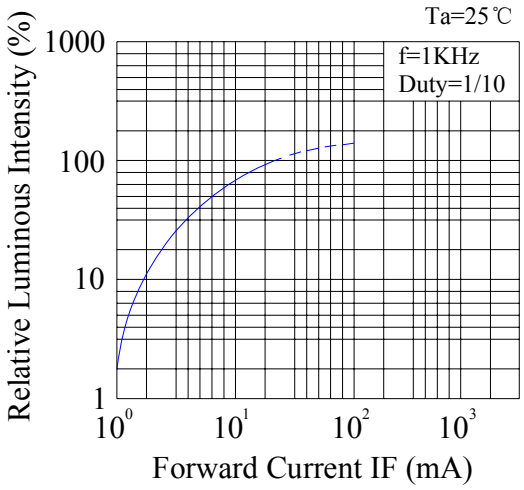
Forward Current & Forward Voltage



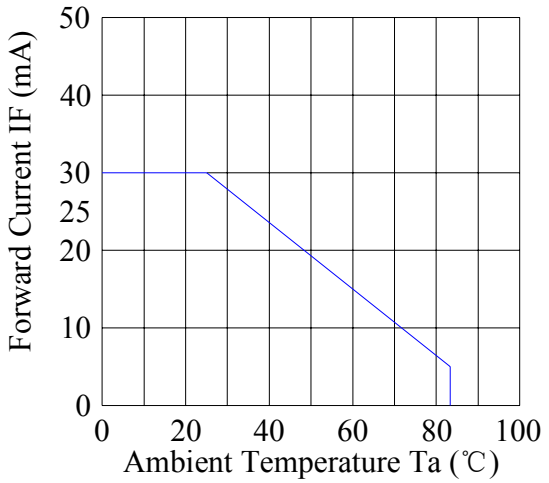
Luminous Intensity & Ambient Temperature



Luminous Intensity & Forward Current



Forward Current Derating Curve



Radiation Diagram